

REMARKS

Responsive to certain objections contained in the Office Action, Figure 1 has been amended, incorporating appropriate labels, as required. Applicant has attached herewith a proposed revision to the drawings,. The proposed changes do not incorporate new matter into this application, and are supported in the specification at page 5. Accordingly, approval of the proposed changes as an amendment to the present application is respectfully requested.

In response to the objection to the specification as set forth at paragraph 4 of the Office Action, Applicant has amended the specification to incorporate the appropriate headings, as required. Moreover, in response to the objection to the claims in paragraph 3 of the Office Action and to the specification in paragraph 6 of the Office Action, Applicant has revised the specification and claims in a manner which addresses and is believed to resolve each of the objections raised by the Examiner. In particular, Applicant has adopted each of the suggestions set forth in paragraphs 3 and 6 of the Office Action. Accordingly, reconsideration and withdrawal of this grounds of objection are respectfully requested.

Finally, omnibus type Claim 6, has been cancelled in response to paragraph 8 of the Office Action.

Claims 1-3 and 12 have been rejected under 35 USC §102(b) as anticipated by Sugiyama, while Claims 5, 7-10, 13 and 15-17 have been rejected under 35 USC §103(a) as unpatentable over Sugiyama in view of Roy (British patent document GB 2335041). In addition, Claims 4 and 16 have been rejected as unpatentable over Sugiyama in view of Braathen et al, while Claim 9 has been rejected as unpatentable over Sugiyama in view Roy. However, for the reasons set forth hereinafter, Applicant respectfully submits that all claims remaining of record in this application distinguish over the cited references, whether considered separately or in combination.

Paragraph 10 of the Office Action states that Sugiyama discloses a method in which sensed vibrations are segmented into two spectral bands, referring in particular to Figure 1a, and that the amplitudes of the spectral bands are compared with predetermined flow rates (citing Column 3, lines 30-35). Applicant respectfully submits, however, that neither of these characterizations is appropriate.

Paragraph 12 of the Office Action states, with regard to Claim 7, that Sugiyama does not require the aid of a segmentor since two sensors are used to detect leaks. Applicant agrees that Sugiyama does not indeed disclose a segmentor. However, Claim 1 recites specifically a step of segmenting the sensed vibrations. This would require, in the case of Sugiyama, two segmentors placed after the sensors in order that sensed vibrations could be segmented. In essence, if the provisions of two sensors constitute segmentation in Sugiyama, it

constitutes the prior segmenting of vibrations to be sensed later. The Office Action states, however, that Sugiyama discloses a comparator but does not require a segmentor. To the extent that it is suggested that it would be obvious to a person skilled in the art to modify Sugiyama to include a segmentor, Applicant respectfully submits that such is not the case. That is, if a person skilled in the art were to take the approach that Sugiyama teaches, using two sensors, why would he depart from this approach to add a segmentor, which is indicated in the Office Action to be unnecessary?

Figure 1a of Sugiyama is a schematic depiction of a section of pipe having acoustic sensors A and B mounted to one end thereof. In the example as shown, a leak occurs at point D. Each of the sensors A and B detects acoustic vibrations generated by the leak, at each of two discrete frequencies f_1 and f_2 , as shown in Figure 1b. The respective frequencies f_1 and f_2 do not constitute spectral bands. Rather, as indicated, they are in fact, discrete frequencies. A spectral band, on the other hand, comprises a range of frequencies rather than a single frequency as shown in Sugiyama.

Figure 3 of Sugiyama shows the apparatus in greater detail. Figure 1a is more closely associated with a process carried out by the unit 17. For this purpose, the apparatus includes two sensors 9 and 10, which are fixed to the pipe in question. The latter produce outputs that are provided to detectors 11 and 12, which determine whether there is a leak. The unit 17, on the other hand, determines where the leak is located.

The manner in which the detectors 11 and 12 operate is described at Column 3, line 24 and beyond in Sugiyama. They compare the output of the sensors with an amplitude threshold. However, it should be noted that there is no disclosure in Sugiyama which suggests that the detector 11 segments the output of the sensor 9 or compares the amplitude of the resulting spectral bands with predetermined values. The same can also be said for detector 12.

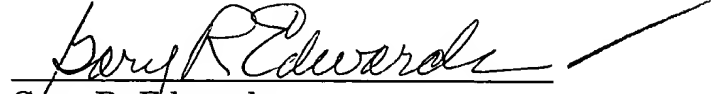
After a detector 11 or 12 has determined that a leak exists, it closes an associated switch 13 or 14, and filters 15,16 and the arithmetic unit 17 process the frequencies to determine its location. The latter do not, however, determine a flow rate, as recited in Claim 1. Accordingly, Applicant respectfully submits that Claim 1 is not anticipated by Sugiyama.

In light of the foregoing remarks, this application should be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and

please charge any deficiency in fees or credit any overpayments to Deposit
Account No. 05-1323 (Docket #3036/50371).

Respectfully submitted,

A handwritten signature in cursive script, reading "Gary R. Edwards", is written over a horizontal line. A long, thin diagonal stroke extends from the end of the signature to the right.

Gary R. Edwards

Registration No. 31,824

CROWELL & MORING, LLP
Intellectual Property Group
P.O. Box 14300
Washington, DC 20044-4300
Telephone No.: (202) 624-2500
Facsimile No.: (202) 628-8844
GRE:kms/038819